Mutate

Operation Manual Version 1.0

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WAVE ALCHEMY

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Introduction

We would like to take this opportunity to thank you for purchasing Mutate - our Kontakt 5 sample-powered hybrid virtual synthesizer, engineered specifically for the creation of complex and morphing bass sounds.

Mutate was driven by the desire to create a truly unique ‘Bass Machine’ synth capable of twisting waveforms ‘inside-out’ using extensive modulation and sequencer parameter lock techniques.

From the start it was our mission to push Kontakt’s scripting capabilities to the limit, to deliver a synth with an experimental edge, capable of devastating, evolving sounds for the bass heads.

As the project progressed, it became obvious that although initially designed for bass sounds, Mutate is capable of a massive range of different tones and colours, which can be twisted and warped into oblivion to create fresh evolving sounds / sequences which have never been heard before…

Mutate is powered by an array of raw waveforms and designed preset multi-samples, recorded directly from a huge hybrid analogue / digital Eurorack modular system, which can be further shaped and ‘mutated’ using waveform layering, filters, envelopes, extensive modulation, 32-step parameter locks and FX processing.

Mutate is about twisting, mangling and transforming waveforms into the sounds of tomorrow…

We hope you enjoy creating new sounds with Mutate as much as we have enjoyed creating the instrument itself.

The Wave Alchemy Team

Install Instructions

You must have a full registered version of Native Instruments Kontakt 5.2.1 or higher to run Mutate.

This (non-licenced) Kontakt instrument does NOT work with the free Kontakt player.

1. After purchasing Mutate, fully download the two RAR files named ‘wa_mutate_part1.rar’ and ‘wa_mutate_part2.rar’ to the same location on your hard drive.

2. IMPORTANT - Only double click the first RAR file to unpack the library files. (You cannot unpack part 2 by itself for example)

You should now have a folder named ‘wa_mutate’. Put this somewhere safe on your hard drive.

TO LOAD THE INSTRUMENTS IN KONTAKT

1. In Kontakt, open the “Browser” on the left (the folder Icon at the top).

2. Locate the ‘wa_mutate’ folder.

3. Double click any of the .nki files (or drag them into the main Kontakt window) to load the instruments. You can choose either the ‘Mutate – Designed Presets’ instrument or the ‘Mutate – Raw Waveforms’ instrument.

4. Alternatively, load any of the .nki ‘preset’ files from either the ‘raw waveforms presets’ or ‘designed instrument presets’ folders.

Please note: some of the additional factory presets require Kontakt version 5.5.1 (or higher) to run.

System Requirements

Full version of Kontakt 5 (this instrument does not work with the free Kontakt player).

4GB free hard disk space.

We recommend a minimum of 4GB of Ram to smoothly run Mutate.

Windows

Windows 7 or Windows 8 (latest Service Pack, 32/64-bit), Intel Core 2 Duo or AMD Athlon 64 X2, 2 GB RAM (4 GB recommended)

Mac

Mac OS X 10.7 or 10.8 (latest update), Intel Core 2 Duo, 2 GB RAM (4 GB recommended)

Mutate

The Mutate instrument comes in two different forms – the ‘Designed Preset Instrument’ and the ‘Raw Waveforms Instrument’. Both of which are loaded by double clicking the .nki files or dragging and dropping them into Kontakts main window.

Raw Waveforms Instrument

SYNTH Page

Once you have loaded the ‘Raw Waveforms Instrument’ the first page you will see is the ‘SYNTH’ page. This is the main instrument page that allows you to mix up to four unique waveforms and a noise source to create complex tones and colours.

The Raw Waveforms instrument is powered by 2730 multi-samples spread across 46 waveform patches. The waveforms are recorded directly from multiple Eurorack modules and are used (like oscillators) to create unique synthesized sounds.

Start off by selecting the different waveforms you want to mix together by clicking and holding the different coloured ‘layers’ to show the waveform menu. You can choose from 37 waveforms with 1 waveform selected per layer.

Choose waveforms that contrast each other and balance them nicely using the oscillator level controls to create a ‘rich’ combination tone.

This is a great starting point, from here you can use filters, modulators and effects to shape your sound and give it more movement over time.

Here’s a breakdown of all of the controls on the SYNTH page starting with the filter section.

FLT MOD – Sets the level of the Filter LFO modulation.

FREQ – Sets the Frequency of the Low Pass Filter.

RES – Sets the Resonance of the Low Pass Filter.

DRIVE – Sets the Drive of the Low Pass Filter.

FLT ENV – Sets the level of the Filter Envelope Modulation.

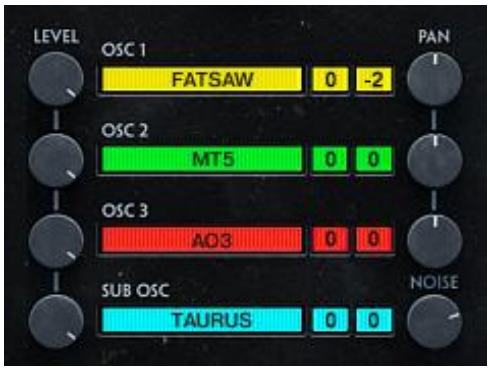
AMP ATTACK – Sets the amplifier Attack Envelope

DECAY – Sets the Amplifier Decay Envelope

HOLD – Sets the Amplifier Hold Envelope

SUSTAIN – Sets the Amplifier Sustain Envelope

RELEASE – Sets the Amplifier Release Envelope



LEVEL(s) – Sets the Level for each Oscillator

OSC 1 – Selects the Waveform for Oscillator 1

OSC 2 – Selects the Waveform for Oscillator 2

OSC 3 – Selects the Waveform for Oscillator 3

SUB OSC – Selects the Waveform for the SUB Oscillator

PAN(s) – Sets the Pan Position for each oscillator in the Stereo Field

NOISE – Sets the Level of Noise to be mixed with the other oscillators

FLT ATTACK – Sets the Filter Attack Envelope

DECAY – Sets the Filter Decay Envelope

HOLD – Sets the Filter Hold Envelope

SUSTAIN – Sets the Filter Sustain Envelope

RELEASE – Sets the Filter Release Envelope

ARROW – Switches visibility between the distortion and modulation parameters.

BYPASS – Enables the distortion circuit. Even when all knobs are set to their default value there will be a subtle coloration of the sound.

INPUT – Sets the Input volume before the distortion circuit.

SMASH – Sets the distortion circuit Smash value.

CRUSH – Sets the distortion circuit Crush value. Middle position is its default position.

BURN – Sets the distortion circuit Burn value.

OUTPUT – Sets the Output volume after the distortion circuit.

The modulation section (accessed by clicking the down arrow just above the CRUSH control) gives you access to LFO parameters, MOD routings, Effects Sends, Unison, Velocity and spread.

SEQ Page

The sequencer is the heart of Mutate with 14 lanes that are used to program ‘step locks’ for the following parameters;

Pitch, Volume, Note Length, Attack, Filter Cutoff, Filter Resonance, LFO Depth, LFO Rate, Stereo Spread, Smash, Crush, Mod Send, Reverb Send, and Delay Send.

The sequencer can have up to 32 steps, allowing 32 ‘step locks’ per lane. Here is where Mutate really comes alive!

The sequencer can be a bit tricky to handle at first with so many steps and options available. Our advice is to keep it simple to start with by using fewer ‘step locks’, or alternatively you could go all out and twist your sound into oblivion. Either way you will soon get the hang of it and realise the true power of Mutate.

RATE – Sets the Rate or Speed of the Sequencer.

FREE – When set to ‘Free’ this knob determines the variable speed of the Sequencer.

SHUFFLE – Adds negative or Positive Shuffle to the groove of the Sequencer.

ON – Globally enables and disables the Step Sequencer.

SEQ BUTTON – Displays the SEQ Page.

SYNTH BUTTON – Displays the SYNTH Page.

FX BUTTON – Displays the FX Page

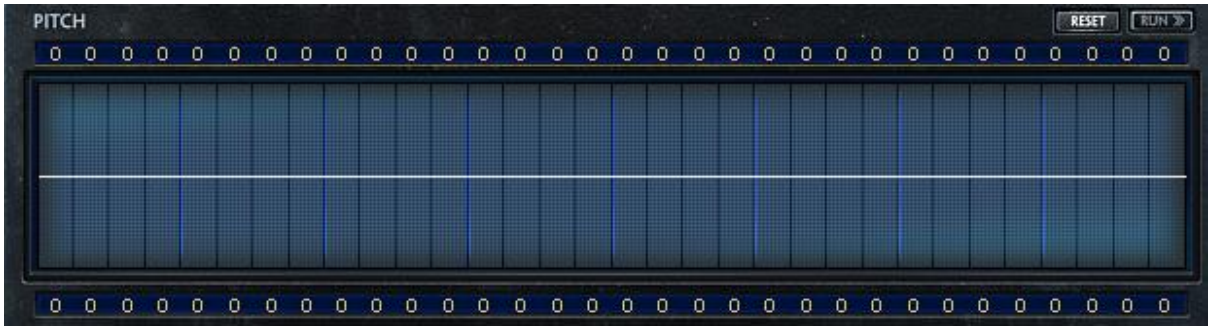
SEQ SELECT – Selects from up to 16 sequences.

COPY – When selected the current Pattern will be copied to the next loaded sequence.

CLEAR – When selected clears the current Sequence.

SEQ SELECTORS – Displays either page 1, 2 or 3 of the Sequence Patterns (lanes).

BUTTONS 1 to 32 – These buttons select the number of steps in the sequence from 1-32.



RESET – Clears the Pitch Sequencer lane

RUN – Enables the Pitch Sequencer lane.

The pitch sequencer is used to sequence the pitch of Mutate with different settings available for each of the 32 steps. The pitch values for each step are shown numerically at the top of each step with 0 being original pitch.

The top row of numerical values can show + or – 12 semitones. The bottom row of numerical values are used to change the Pitch octave of each step.

RESET – Clears the Volume Sequencer lane.

The Volume Sequencer lane is used to sequence the velocity control of Mutate with different settings available for each of the 32 steps.

BUTTONS 1 to 32 – Creates a rest or stop on the chosen step.

RESET – Clears the Length Sequencer lane.

LENGTH SELECT – Sets the length of each Note to a set value. To use with the table below set the length to ‘variable’.

The Attack sequencer lane is used to sequence the AMP envelope attack of notes. Works in conjunction with the Sequencer Length lane.

RESET – Clears the Attack Sequencer lane.

RUN – Enables the Attack Sequencer lane.

The Filter Frequency lane is used to sequence the filter frequency over time.

RESET – Clears the Filter Sequencer lane.

RUN – Enables the Filter Sequencer lane.

The Filter Resonance lane is used to sequence the filter resonance over time.

RESET – Clears the Filter Resonance Sequencer lane.

RUN – Enables the Filter Resonance Sequencer lane.

The Filter LFO Depth lane is used to sequence the Filter LFO depth over time.

RESET – Clears the Filter LFO Depth Sequencer lane.

RUN – Enables the Filter LFO Depth Sequencer lane.

The Filter LFO Rate lane is used to sequence the Filter LFO rate over time.

RESET – Clears the Filter LFO Rate Sequencer lane.

RUN – Enables the Filter LFO Rate Sequencer lane.

The Stereo Spread lane is used to sequence the Stereo Spread over time.

RESET – Clears the Stereo Spread Sequencer lane.

RUN – Enables the Stereo Spread Sequencer lane.

The Smash lane is used to sequence the Smash Control over time.

RESET – Clears the Smash Sequencer lane.

RUN – Enables Smash Sequencer lane.

The Crush lane is used to sequence the Crush Control over time.

RESET – Clears the Crush Sequencer lane.

RUN – Enables the Crush Sequencer lane.

The Mod Send lane is used to sequence the Mod Send Control over time.

RESET – Clears the Mod Send Sequencer lane.

RUN – Enables the Mod Send Sequencer lane.

The Reverb Send lane is used to sequence the Reverb Send Control over time.

RESET – Clears the Reverb Send Sequencer lane.

RUN – Enables the Reverb Send Sequencer lane.

The Delay Send lane is used to sequence the Delay Send Control over time.

RESET – Clears the Delay Send Sequencer lane.

RUN – Enables the Delay Send Sequencer lane.

FX Page

Mutates FX page is where you can add movement to your sound with a modulation effect (selectable between Flanger, Phaser and Chorus).

You can add further depth and definition using the reverb and delay modules to really bring your sound to life.

MOD FX SELECT – select the Mod Effect (Chorus, Phaser or Flanger).

EXT OUT – Sets the Mod Send to use the External Out. This is helpful when sequencing the sends with external effects in your host sequencer.

MOD DEPTH – Sets the Depth for the selected Mod Effect (Chorus, Phaser or Flanger).

MOD RATE – Sets the Speed for the selected Mod Effect (Chorus, Phaser or Flanger).

MAD PHASE – Sets the Phase for the selected Mod Effect (Chorus, Phaser or Flanger).

FEEDBACK – Sets the Feedback for the selected Mod Effect (Phaser or Flanger).

COLOUR – Sets the Colour for the selected Mod Effect (Flanger).

ER/LR – Switches the display between the Early and Late Reflection parameters for the Reverb.

REVERB SELECT – Select the type of reverb from a list of 20 impulse responses.

EXT OUT – Sets the Reverb Send to use the External Out. This is helpful when sequencing the sends with external effects in your host sequencer.

PRE-DELAY – Sets the Pre Delay for the Reverb.

SIZE – Sets the Reverb Early Reflection Size.

HI-PASS – Sets the Reverb Early Reflection High Pass Filter.

LOW-PASS – Sets the Reverb Early Reflection Low Pass Filter.

TIME – Sets the Delay Time.

FEEDBACK – Sets the Delay Feedback.

EXT OUT – Sets the Delay Send to use the External Out. This is helpful when sequencing the sends with external effects in your host sequencer.

WIDTH – Sets the Ping-Pong Intensity of the Delay.

HI-CUT – Sets the Low Pass Filter for the Delay.

SEQ START KEY – Sets the Start Key for the Sequence Patterns.

KEY RANGE – Set the low and High Key to control the key range of Mutate.

RANDOM TUNE – Randomly tunes each note to give a more analogue sound. Lower settings produce subtle tuning differences while higher settings produce a ‘broken synth’ sound.

RANDOM VOLUME – Randomly changes the volume of each note for subtle (or not so subtle) analogue variations.

MODE – Sets the play mode between Monophonic, Legato and Polyphonic.

Kontakts keyboard shows the MIDI trigger notes for sequences 1-16 (pink) along with the MIDI notes that trigger the synth (blue).

Ranges are controlled with the parameters above.

Designed Presets Instrument

The Mutate ‘Designed Presets’ instrument is very similar to the Raw Waveforms version. The difference is that on the SYNTH page you can edit the sample start of the chosen waveform using the sample start and random controls.

The Designed Preset Instrument is powered by 6305 perfectly looped multi-samples, spread across 142 expressive patches which have been synthesized and shaped with an extensive modular Eurorack system. These sounds are ready to use straight out of the box, with filter settings, modulation, and envelope settings recorded straight from the Eurorack setup.

Each waveform is unique and evolves over time allowing you to sweep through rich harmonics to create movement. A ‘de-click’ feature is available on the FX page which introduces a very short fade to prevent any clicks and pops while the sample start is being edited.

Everything else including LFO’s, sequencers and effects is exactly the same as the Raw Waveforms instrument.

S.START – Sets the Sample Start control. Used to sweep through a waveform.

RANDOM – Randomises the Sample Start position each time a different key is played.

Credits

Concept – Wave Alchemy, Rui Peixoto and Matthew Fudge

Sampling / Sound Design – Wave Alchemy and Rui Peixoto

Programming / Scripting – Divergent Audio Group

Graphics Design – Divergent Audio Group

Demo Creators

Donny Walls – ‘Kill the Virus’ Produced by Donny Walls

www.soundcloud.com/donnyw

Nightmusique – ‘Deep Yellow’ Produced by Nightmusique

www.nightmusique.com

Mike Ritchie – ‘Mutate’ Produced by Mike Ritchie

www.mikeritchiemusic.com

Moduler – ‘Mutate’ Produced by Moduler

https://soundcloud.com/moduler

Michael Lovatt – ‘Mutated’ Produced by Michael Lovatt

https://soundcloud.com/michaellovatt

Factory Library Preset Sound Designers

Rui Peixoto

Dan Byers

Kit List

The Eurorack modules used for sound synthesis;

Oscillators

Cylonix cyclebox II, Make noise DPO, Synthesis Tech E350 morphing terrarium, WMD phase displacement oscillator, Make noise Phonogene

Filters

Macbeth Dual state variable filter, STG Post lawsuit LPF, Make noise Optomix (Low pass gate), Manhattan analog MA35

VCAs/mixers

Oakley classic VCAs, Make noise optomix (Low pass gate), WMD triple bipolar VCA, Manhattan analog MA35, Circuit Abbey unify stereo mixer, Fonitronik mh01

Effects

Flight of harmony sound of shadows, Doepfer A-188-1 BBD module, Flight of Harmony plague bearer

Modulators

Make noise Maths, 4ms pingable envelope generator, Malekko envelator, Doepfer A155, Acidlab autobot, Synthwerks PGM4x4